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Louis-Philippe Beland
Louisiana State University

Bulent Unel
Louisiana State University

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Department of Economics
Louisiana State University
Baton Rouge, LA 70803-6306
http://www.bus.lsu.edu/economics/

DEMOCRATS AND UNIONS*

Louis-Philippe Beland
Louisiana State University

Bulent Unel
Louisiana State University

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Abstract

This paper investigates whether the Democratic Party has any significant effects on unions. Employing Regression Discontinuity (RD) approach on gubernatorial elections in U.S. states over the last three decades, we investigate causal effects of Democratic governors on unionization of workers, and unionized workers' working hours and earnings. Surprisingly, we find no significant impact from Democratic governors on union membership and union members' labor-market outcomes.

JEL Classification: J58, J31, D72
Keywords: Political Parties, Unions, Voting behavior, Regression Discontinuity

*Louis-Philippe Beland and Bulent Unel: Department of Economics, Louisiana State University, Baton Rouge, LA 70803. E-mail: lbeland@lsu.edu and bunel@lsu.edu. We are indebted to Barry Hirsch for his invaluable comments and suggestions.

1 Introduction

Since the success of Franklin D. Roosevelt's New Deal in the 1930s, which greatly benefited labor organizations by giving workers the right to join a union, unions have shown a strong allegiance to the Democratic Party. Unions have played an important role in the Democrats' success by encouraging their members to support the party and raising money for Democratic candidates. For instance, according to National Institute for Labor Relations Research (NILRR) estimates, unions spent about $1.4 billion in 2010 and $1.7 billion in 2012 election cycles (NILLR, 2013), and the overwhelming majority of this spending went to Democrats. In response to this strong support from unions, Democrats claim that "[F]or decades, Democrats have stood alongside labor unions in defense of fair pay and economic security."[1] Have Democrats had any significant impact on unions?

In this paper, we investigate whether Democrats have had any impact on unionization (and deunionization) of workers as well as their working hours and earnings. Using data on union membership in the Census Population Survey (CPS) Outgoing Rotation Group (ORG) files over 1983–2013 together with gubernatorial election results in 50 states, we address the question by exploiting random variation associated with close elections in a regression discontinuity (RD) design. We find that Democrats have had no significant effects on unionization of workers. We also find that Democratic governors have no impact on labor-market outcomes of unionized workers (relative to non-unionized ones).

These results are surprising because U.S. governors have a high degree of autonomy in exercising their power in their policy choices, and several studies have documented that the party allegiance of governors has a significant impact on their actions (Besely and Case (1995), Knight (2000), Alt and Lowry (2000), among many others).[2] However, party affiliation may have different effects on unionization of workers in different earning groups. In union-wage literature, several authors have found that unions compress the structure of wages in the sense that it increases wages in the lower end of earning distribution and decreases wages in the upper end (see Card (1996), Frandsen (2014), and Rios-Avila and Hirsch (2014) among many others). We divide our sample into five earning groups based on

[1] This is the statement on the Democratic Party's official web site.

[2] U.S. governors have substantial powers and controls over their states. For example, governors head the executive branch that is responsible for proposing budget, recommending legislation, and appointing key personnels. In addition, they have powers to levy taxes, establish license fees, spend tax revenues, regulate businesses, manage the health-care system, and provide emergency services. By having the right to veto state bills, governors have considerable control over state policies.

predicted earning distribution, and investigate the impact of Democrats on (de)unionization of workers and their earnings for each sub-group. We find no significant impact of the party affiliation on any earning groups.

We also investigate if Democrats have different effects on the unionization of skilled and unskilled workers and their corresponding labor-market outcomes. This issue is important, because many economists have argued that the skill-biased technical change (SBTC) is the driving factor behind the steady decline in union power in the U.S.[3] For example, Acemoglu et al. (2001) develop a model where SBTC undermines unionization by providing better outside options for skilled workers (see also Dinlersoz and Greenwood (2012)). If SBTC affects skilled and unskilled workers asymmetrically, the Democratic Party might then have a positive impact on unionization of unskilled workers and their labor-market outcomes. However, our analysis reveals that this is not the case.

Almost half of the states have the right-to-work (RTW) law, which prohibits agreement between employers and unions that prevent them from excluding non-union workers. It essentially gives workers the right to benefit from unions without paying for it, and thus the law weakens union power. Consequently, the party affiliation may matter for the unionization of workers and their labor-market outcomes in non-RTW states. We therefore restrict our sample to non-RTW states, and find that Democrats have no significant impact on unionization and related labor-market outcomes in such states either.[4]

One can argue that neither Democrat nor Republican governors are likely to make much of a difference unless they are matched with legislatures that are of the same party. The recent passage of the RTW laws in states following election of Republican legislatures and governors gives a support to this argument. For this reason, we investigate the impact of party affiliation on unionization when both governors and legislatures are from the same party. However, our RD analysis based on this restricted sample yields qualitatively the same results.

Finally, on the methodological side, following Lee and Lemieux's (2014) checklist, we conduct an extensive set of robustness tests to evaluate the validity of our RD designs. For example, for our RD designs to be valid, the states where Democrats barely won should be similar to the states where they barely lost elections. In addition, party candidates should

[3]Union power has declined considerably over the last three decades: while 25 percent of workers were union members in 1985, this fraction dropped to less than 12 percent in 2013.

[4]We also consider specifications with additional control variables and subsamples, and our results remain mostly the same (see Section 4.1).

have no control over the election results. We provide evidence that supports the validity of the RD approach in the present context (see Section 3.2). In sum, our results are robust to a number of different specifications, controls, and samples.

This paper is related to a large empirical literature that estimates the impact of unions on the wage distribution. In a seminal paper, Card (1996) studies the effects of unions on the structure of wages, and finds that unions raise wages more for workers with lower skills. Using a semiparametric approach, DiNardo et al. (1996) find that *deunionization* along with supply and demand shocks were important factors behind the rising wage inequality in the U.S. from 1970 to 1980. Using establishment-level data sets in the U.S. during 1984–99, DiNardo and Lee (2004) use a RD design and close union elections to estimate the impact of unionization on wages along with employment, output, and business survival, and find small-to-zero effects on the outcomes. In a recent study, Frandsen (2014) estimates the effects of unionization on establishment and worker outcomes in a RD design based on close union elections, and finds that unionization significantly decreases establishment-level payroll and average worker earnings.[5] We contribute to this literature by investigating the role of the political party of governors on unionization and union workers' labor-market outcomes.

Our paper is also related to a strand of the political economy literature that explores whether partisan allegiance of policy makers matters for policy outcomes. Several studies in this literature have analyzed the impact of party affiliation of governors on taxes, minimum wages, spending, family assistance, and worker compensation in the U.S. (Besley and Case (1995) and (2003), Reed (2006), and Leigh (2008) among many others). A growing number of studies in this literature have used RD designs to evaluate party effects in various contexts. In an influential paper, Lee et al. (2004), using a RD design, find that party affiliation has a large impact on a legislator's voting behavior.[6] Beland (2015) studies whether party allegiance of governors has any differential impact on the labor-market outcomes of blacks relative to whites, and finds that Democratic governors cause an increase in the annual hours worked by blacks relative to whites. Beland and Unel (2015) investigate the importance of the party affiliation of U.S. governors on immigrant workers'

[5]Other important contributions to this literature are Card (2001), Hirsch and Schumacher (1998), Gosling and Lemieux (2001), Rios-Avila and Hirsch (2014) among many others. See Card et al. (2004) for an early review of this literature.

[6]Ferreira and Gyourko (2009) exploit the random variation associated with close U.S. municipal elections between 1950 and 2000. They find that the party affiliation of mayors has no significant impact on the size of local government, the composition of local public expenditure, or crime rate.

outcomes. They find that immigrants are more likely to be employed, work longer hours and more weeks, and have higher earnings under Democratic governors. Our paper is the first to address the impact of party allegiance in a RD design on the union labor markets.

The rest of the paper is organized as follow. The next section studies the empirical framework along with data and main results. Section 3 presents sensitivity analysis related to our specifications, controls, and samples. Section 4 concludes the paper.

2 Empirical Framework and Main Results

2.1 Econometric Specification

We employ a regression discontinuity (RD) design to determine the effect of party affiliation of U.S. governors on unionization of workers. Since several factors such as labor-market conditions, voter characteristics, party incumbency, etc. can also affect election results, the results based on simple OLS will be biased. Following Lee (2008), we address the endogeneity problem by exploiting random variations associated with *close* elections.

We take advantage of the structure of the CPS data which allows us to match individuals in two adjacent years,[7] and thus we can record entries to and exits from unions. Let U denote a dummy variable such that $U_{ist} = 1$ if individual i in state s at time t is a union member, and is 0 otherwise. We then define

$$U^{+}_{ist} = \begin{cases} 0 & \text{if } U_{ist} = 0,\ U_{ist+1} = 0 \\ 1 & \text{if } U_{ist} = 0,\ U_{ist+1} = 1 \end{cases}, \qquad U^{-}_{ist} = \begin{cases} 0 & \text{if } U_{ist} = 1,\ U_{ist+1} = 1 \\ 1 & \text{if } U_{ist} = 1,\ U_{ist+1} = 0 \end{cases}, \quad (1)$$

and thus U^{+} is a dummy for entry to the union, and U^{-} is a dummy for exit from the union.

We then investigate the impact of party affiliation on unionization and deunionization of workers by estimating the following specification:

$$U^{j}_{ist} = \beta_s + \beta_t + \beta_D D_{st} + F_D(MV_{st}) + \beta_X X_{ist} + \varepsilon_{ist}, \quad (2)$$

where $j = +, -$. In specification (2), β_s and β_t denote state and time fixed effects, respectively; D is the treatment variable that equals one if a Democratic governor is in power, zero

[7] However, the data are not in a panel structure: an individual first interviewed in year t will be interviewed in year $t + 1$, but after that she will be dropped from the sample.

otherwise; $F(MV)$ is a polynomial function of the margin of victory MV; X denotes a vector of control variables; and ε the error term. The coefficient of interest is β_D.

The set of control variables, X, includes each individual's gender, race, age, marital status, and education.[8] We define MV as the percentage of votes cast for the winner minus the percentage of votes cast for the second candidate, and MV_{st} denotes the margin of victory in the most recent gubernatorial election prior to year t in state s. We exclude all elections where a third party candidate won, and set election where the Democratic candidate won to be positive and negative otherwise. The cutoff point for the MV is 0 percent, and thus a positive (negative) MV indicates that a Democratic (Republican) governor won. Following Gelman and Imbens (2014), we assume that $F_j(MV)$ is a second-order polynomial function and use parametric regression discontinuity approach to estimate equation (2). As a sensitivity check, we consider different order polynomials and local-linear regression discontinuity design. The results obtained from these alternative specifications are similar to our benchmark results.

We also investigate whether party affiliation has any differential effects on the labor-market outcomes of unionized workers relative to those who are not. We use hours worked per week, weekly income, and hourly income as labor-market outcomes. Let Y be a labor-market outcome, we then estimate the following specification:

$$Y_{ist} = \beta_s + \beta_t + \beta_D D_{st} + \beta_U U_{ist} + \beta_{DU} D_{st} \times U_{ist} + F_D(MV_{st}) + \beta_X X_{ist} + \varepsilon_{ist}, \quad (3)$$

where U_{ist} equals one if individual i in state s at time t is a union member, zero otherwise. Thus, the coefficient of interest, β_{DU}, measures the impact of Democratic governors on unionized workers' labor-market outcomes (relative to non-unionized workers' outcomes).

In our main analysis, we estimate above equations using all data. However, we later present results using different samples based on income and skill distributions. Before presenting the results, we now turn to discuss the data that we use in our analysis.

2.2 Data

The source of our labor data is the monthly Current Population Survey (CPS) Merged Outgoing Rotation Group (MORG) files from Unicon Corporation covering 1983 to 2013.

[8] Our regressions include dummies for sex, marital status, three race dummies, four education dummies, and a cubic in age.

Our time period is dictated by the availability of the data on unions. Our sample consists of all wage and salary workers, ages between 16 and 64 years old. We exclude self-employed workers as well as those covered by a collective bargaining agreement who are not union members. We also exclude all workers with allocated union status, weekly hours, and weekly earnings.[9] Earnings are converted into real values (in 2009-chained prices) using the personal consumption expenditure (PCE) index from the Bureau of Economic Analysis (2014). Top-coded earnings are multiplied by 1.5 and workers with (real) income below $3.65 per hour and above $150 per hour are dropped (Autor et al. (2008), Hirsch and Schumacher (1998)).[10]

The data are sorted into three races (black, white, and other), two marital status, and five education categories (less than high school, high school graduate, some college, college graduate, and advanced degree). We also record each individual's union-membership status as well as the industry in which she works, and worker class.[11] The fraction of all wage and salary workers who are union members has been steadily decreasing in the U.S. from about 20 percent in 1983 to 11 percent in 2013. Despite this dramatic decline in union membership, unionization has still remained strong in certain occupations. For instance, the unionization rates among teachers and construction & extraction workers in 2013 were about 38 and 19 percent, respectively.

As briefly mentioned in the previous section, the CPS ORG data allow us to match individuals in two adjacent years. The CPS does not have individual identifiers, but it contains a household identification number and record line numbers. Uniquely matched pairs were identified with identical household ID, record lines, survey month, sex, and race (Card (1996) and Schumacher (1999)). We only consider individuals with a schooling difference in two successive years less than one year and an age difference less than two.[12]

The data on gubernatorial elections are from the *Atlas of U.S. Presidential Elections*

[9]Dropping imputed earning figures is not a straightforward exercise. In doing so, we closely follow Hirsch and Schumacher (2004), Bollinger and Hirsch (2006), and in particular, Western and Rosenfeld (2011). However, our results remain largely similar even if we do not drop workers with imputed figures.

[10]The final sample contains about 5.4 million observations.

[11]We classify workers as private or public employees. In estimating equations (1) and (2), we don't include industry dummies due to the fact that this variable is endogenously determined. However, as discussed in detail in Section 3.1, including industry dummies and industry-specific time effects into the models do not have any significant impact on the results.

[12]There are problems with assigning household IDs in 1985 and 1995; consequently matching rates between 1984 and 1985, 1985 and 1986, 1994 and 1995, and 1995 and 1996 were less than 30 percent. As a robustness check, we run regressions excluding these years; and results qualitatively remain the same.

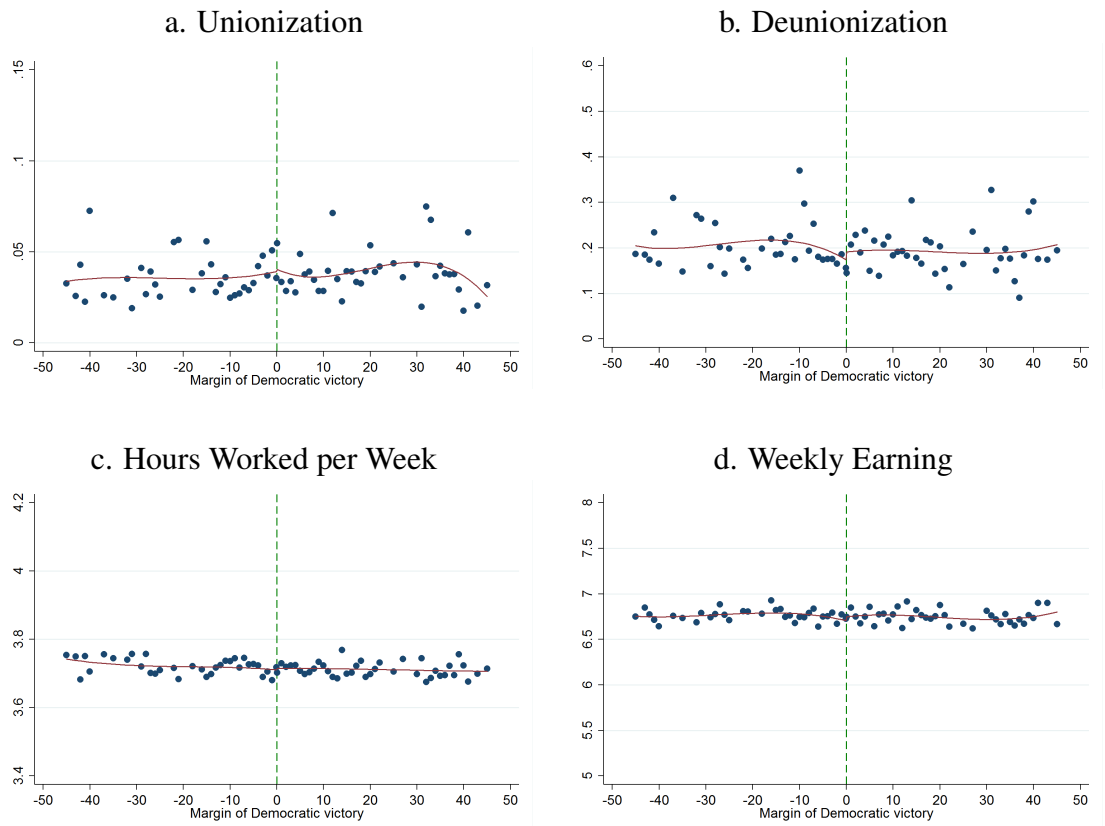


Figure 1: The Impact of Democratic Governors on Unionization and Related Labor-market Outcomes

(Leip (2015)) and the ICPSR 7757 (1995) files. From 1983 to 2013, there are 1527 state×year observations, of which Democrats governed 772 times, which is about 51% of the sample. As discussed in the previous section, we define the margin of victory (MV) (in each election in each state) as the percentage of votes cast for the winner minus the percentage of votes cast for the second candidate; and we keep only election where either a Democrat or Republican won.

2.3 Main Results

We begin our analysis by providing some graphical evidence on (insignificant) effects of Democratic governors on unionization and related labor-market outcomes for union workers. Figures 1.a–1.d show the implications of the discontinuity at the cutoff point where a party barely wins the election. Figures 1.a and 1.b suggest that Democratic governors

Table 1.A. IMPACT OF PARTY AFFILIATION ON UNIONIZATION

Variable	Unionization	Deunionization
D[emocrat]	0.0010	−0.0059
	(0.0013)	(0.0090)

Table 1.B. IMPACT OF PARTY AFFILIATION ON LABOR-MARKET OUTCOMES

Variable	Weekly Earning	Hourly Earning	Hours per Week
D[emocrat]	−0.0023	−0.0043	0.0017
	(0.0063)	(0.0059)	(0.0027)
U[nion]	0.2000***	0.1980***	0.0436***
	(0.0108)	(0.0113)	(0.0051)
D×U	0.0024	0.0010	0.0047
	(0.0157)	(0.0160)	(0.0036)

Notes: The data draw on the CPS ORG samples from CEPR Uniform Extracts for 1983–2013. All regressions include state fixed effects, time effects, and all other control variables specified in equation (1). Numbers in parentheses are standard errors based on clustering data at state level; ***, **, and * represent statistical significance at the 1%, 5%, and 10% level, respectively.

have no impact on workers' unionization and deunionization. Figures 1.c and 1.d show the impact of Democratic governors on labor-market outcomes of unionized workers.[13] These graphs do not show any discernible changes around the cutoff point implying that Democratic governors have not had any impact on earnings or weekly hours worked of unionized workers.

We now turn to estimate the effect of party allegiance on these key variables using the RD designs outlined in the previous section. Table 1.A reports the impact of party affiliation on unionization and deunionization of workers based on econometric specification (2). The estimated coefficient for D is very small and statistically insignificant in all specifications. Thus, Democratic governors have not had any significant effects on unionization of workers. Table 1.B presents the impact of party affiliation on labor-market outcomes of unionized workers based on equation (3). The estimated coefficients for U[nion] in Table 1.B implies that union members on average work longer and earn higher. Findings that

[13]For the sake of brevity, we do not present the graph for hourly earnings, but it is qualitatively similar to Figure 1.d.

union members earn higher income may reflect that unions bargain for wages that are above the market level. The coefficient of interest is β_{DU}. Note that the estimated coefficient on D×U is insignificant in all specifications, suggesting that Democratic governors have not had any significant effects on the labor-market outcomes of unionized workers (relative to those who did not unionize).

3 Sensitivity Analysis

This section investigates how robust our results are to a number of different specifications. We consider two types of sensitivity analyses: robustness of our results to different samples and conditioning variables, and robustness of our RD designs to different specifications.

3.1 Different Samples and Additional Conditional Variables

We begin our analysis investigating how party affiliation affects unionization and labor market outcomes of workers in different income groups. Such an extension is important because the party affiliations of governors may have a differential impact on unionization and labor-market outcomes of different income groups. Several studies have provided evidence that unions compress the structure of wages. For instance, Frandsen (2014) compares workers' earnings before and after close union elections, and finds evidence that unionization has positive effects in the lower end and negative effects in the higher end of the earning distribution (see also Card (1996), DiNardo et al. (1996)).

Income groups are determined using the predicted earning distribution.[14] Specifically, in each year we sort individuals based on the predicted earning distribution into the following income groups (measured in percent): 0-20, 20-40, 40-60, 60-80, 80-100. We then estimate equations (1)–(3) for each of these income groups. Tables 2.A and 2.B report the results based on equations (2) and (3).

Several interesting points in these tables are worth noting. First, according to Table 2.A, party affiliation has no impact on unionization and deunionization of workers. Second, except for the last column, the estimated coefficients on union in earning regressions

[14]The predicted earning distribution is obtained by regressing in each year log weekly earnings on gender, marital status, the dummy variables for four education categories, three race dummies, a cubic in age, twenty industry dummies, twenty three occupation dummies, and state and time fixed effects.

Table 2.A. Impact of Party Affiliation on Unionization, Different Income Groups

Variable	[0-20] I	[20-40] II	[40-60] III	[60-80] IV	[80-100] V
Panel A. Unionization					
D[emocrat]	0.0009	0.0015	0.0040*	0.0004	−0.0015
	(0.0025)	(0.0018)	(0.0021)	(0.0027)	(0.0016)
Panel B. Deunionization					
D[emocrat]	−0.0016	−0.0099	−0.0115	−0.0050	0.0102
	(0.0149)	(0.0123)	(0.0128)	(0.0073)	(0.0142)

Table 2.B. Impact of Party Affiliation on Labor Markets, Different Income Groups

Variable	[0-20] I	[20-40] II	[40-60] III	[60-80] IV	[80-100] V
Panel A. Hours per Week					
D[emocrat]	−0.0004	0.0044	−0.0026	0.0004	0.0035
	(0.0069)	(0.0046)	(0.0035)	(0.0031)	(0.0026)
U[nion]	0.1221***	0.0927***	0.0375***	0.0236***	−0.0109**
	(0.0087)	(0.0108)	(0.0057)	(0.0023)	(0.0050)
D×U	0.0091	0.0029	0.0089	0.0009	0.0004
	(0.0093)	(0.0079)	(0.0066)	(0.0031)	(0.0056)
Panel C. Weekly Earning					
D[emocrat]	−0.0056	−0.0068	−0.0031**	−0.0067	0.0033
	(0.0093)	(0.0089)	(0.0061)	(0.0059)	(0.0063)
U[nion]	0.2346***	0.2248***	0.2161***	0.2853***	−0.0482***
	(0.0104)	(0.0128)	(0.0125)	(0.0138)	(0.0098)
D×U	0.0007	−0.0071	0.0033	−0.0085	−0.0073
	(0.0097)	(0.0101)	(0.0197)	(0.0102)	(0.0141)
Panel D. Hourly Earning					
D[emocrat]	−0.0057	−0.0079	0.0013	−0.0082	−0.0017
	(0.0077)	(0.0070)	(0.0075)	(0.0062)	(0.0059)
U[nion]	0.2124***	0.1942***	0.2112***	0.2740***	−0.0267**
	(0.0091)	(0.0166)	(0.0112)	(0.0132)	(0.0106)
D×U	−0.0036	−0.0112	−0.0036	−0.0075	−0.0049
	(0.0129)	(0.0132)	(0.0158)	(0.0090)	(0.0118)

Notes: The data draw on the CPS ORG samples from CEPR Uniform Extracts for 1983–2013. All regressions include state fixed effects, time effects, and all other control variables specified in equation (1). Numbers in parentheses are standard errors based on clustering data at state level; ***, **, and * represent statistical significance at the 1%, 5%, and 10% level, respectively.

are significant and positive for all income groups (see Table 2.B). They are negative and statistically significant for the highest income group [80-100], and these findings are in line with Dinardo et al. (1996) and Frandsen (2014). Finally, the estimated coefficient for $D \times U$ is insignificant in all regressions, suggesting that Democratic governors have had no significant impact on labor-market outcomes of unionized workers (relative to non-unionized ones).

Several authors have argued that skilled-biased technical change (SBTC) has been the driving factor behind rapid deunionization in the US over the past three decades (Acemoglu et al. (2001); Dinlersoz and Greenwood (2012)). According to these studies, SBTC undermines the coalition among skilled and unskilled workers by providing better outside options to skilled workers. With this structural transformation stemming from directed technical change, how do our results change if we consider these two groups separately? Tables 3.A and 3.B report the results for each skill group. Table 3.A shows that Democratic governors have a negative and barely significant impact on the unionization of skilled workers (at 10%), and their impact on the unionization of unskilled workers and deunionization of either group is insignificant. Table 3.B presents the impact of Democratic governors on the labor-market outcomes of skilled and unskilled workers. Note that none of the coefficients for the interaction term D$\times$U is significant.

Almost half of U.S. states have a right-to-work (RTW) law which essentially gives employees the right to benefit from unions without paying for it.[15] Since with the RTW law employees benefit from unions without having to join, unions are weaker in RTW states.[16] In the present context, this further suggests that party affiliation might have stronger impact on unionization and labor-market outcomes in non-RTW states.[17] Tables 4.A and 4.B report the regression results (based on equations (2) and (3), respectively) for non-RTW states. According to Table 4.A, the estimated coefficients for D[emocrat] are small and statistically

[15]In 2014, the states that have this law are: Alabama, Arizona, Arkansas, Florida, Georgia, Idaho, Indiana, Iowa, Kansas, Louisiana, Michigan, Mississippi, Nebraska, Nevada, North Carolina, North Dakota, Oklahoma, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, Wyoming. Indiana and Michigan passed the law in 2012, and Wisconsin in 2015. Since our time period covers 1983-2013, we do not include them into the RTW states. Idaho passed this law in 1985, so we exclude it from our sample that covers only non-RTW states.

[16]In an influential study, Holmes (1998) considers what happens to manufacturing activities when one compares RTW states with non-RTW states, and he finds that, on average, there is a considerable increase in manufacturing activities when one crosses from a non-RTW state to a RTW state.

[17]Wages in RTW states are about 3% lower than those in non-RTW states, and workers are less likely get health insurance in RTW states (Shieholz and Gould (2011)). However, the unemployment rate is lower in RTW states.

Table 3.A. Impact of Party Affiliation on Unionization, Different Skill Groups

Variable	Unionization	Deunionization
Panel A. Skilled Workers		
D[emocrat]	-0.0077^{*}	0.0118
	(0.0040)	(0.0225)
Panel B. Unskilled Workers		
D[emocrat]	-0.0069	-0.0040
	(0.0044)	(0.0155)

Table 3.B. Impact of Party Affiliation on Labor Markets, Different Skill Groups

Variable	Weekly Earning	Hourly Earning	Hours per Week
Panel A. Skilled Workers			
D[emocrat]	0.0033	-0.0023	0.0018
	(0.0074)	(0.0070)	(0.0029)
U[nion]	0.0037	0.0052	0.0258^{***}
	(0.0092)	(0.0107)	(0.0079)
D$\times$U	-0.0073	-0.0065	0.0018
	(0.0131)	(0.0128)	(0.0048)
Panel B. Unskilled Workers			
D[emocrat]	-0.0054	-0.0055	0.0011
	(0.0072)	(0.0070)	(0.0031)
U[nion]	0.2757^{***}	0.2694^{***}	0.0491^{***}
	(0.0107)	(0.0114)	(0.0043)
D$\times$U	0.0009	-0.0001	0.0052
	(0.0128)	(0.0134)	(0.0039)

Notes: The data draw on the CPS ORG samples from CEPR Uniform Extracts for 1983–2013. All regressions include state fixed effects, time effects, and all other control variables specified in equation (1). Numbers in parentheses are standard errors based on clustering data at state level; ***, **, and * represent statistical significance at the 1%, 5%, and 10% level, respectively.

Table 4.A. Impact of Party Affiliation on Unionization, Non-RTW States

Variable	Unionization	Deunionization
D[emocrat]	0.0024	0.0013
	(0.0015)	(0.0085)

Table 4.B. Impact of Party Affiliation on Labor Markets, Non-RTW States

Variable	Weekly Earning	Hourly Earning	Hours per Week
D[emocrat]	−0.0007	−0.0006	−0.0032
	(0.0117)	(0.0107)	(0.0037)
U[nion]	0.1914***	0.1952***	0.0388***
	(0.0149)	(0.0151)	(0.0056)
D×U	−0.0051	−0.0089	0.0071*
	(0.0201)	(0.0196)	(0.0040)

Notes: The data draw on the CPS ORG samples from CEPR Uniform Extracts for 1983–2013. All regressions include state fixed effects, time effects, and all other control variables specified in equation (1). Numbers in parentheses are standard errors based on clustering data at state level; ***, **, and * represent statistical significance at the 1%, 5%, and 10% level, respectively.

insignificant, i.e. Democratic governors have no impact on (de)unionization of workers in non-RTW states either. Table 4.B presents the results for the impact of Democratic governors on labor-market outcomes of unionized workers in non-RTW states. They have a very small, positive, and (barely) significant effect on weekly hours worked, but no effects on other outcome variables.

The recent passages of the RTW law in states when governors and legislatures are of the same party suggest that party affiliations of governors might be more important if matched with a Democratic legislatures. To see whether this is the case in the present context, we restrict our sample to the state-time observations where governors and legislatures are from the same party. The results as shown in Tables 5.A and 5.B indicate that even when governors and legislatures are from the same party, the impact of Democratic governors on unionization and union workers' labor-market outcomes are insignificant.

We also consider specifications (2) and (3) with more control variables. Specifically, we include industry dummies, industry-specific time dummies, and region-specific time

Table 5.A. Unionization: Legislatures and Governors from the Same Party

Variable	Unionization	Deunionization
D[emocrat]	-0.0001	-0.0127
	(0.0011)	(0.0097)

Table 5.B. Labor-Market Outcomes: Legislatures and Governors from the Same Party

Variable	Weekly Earning	Hourly Earning	Hours per Week
D[emocrat]	0.0073	0.0047	0.0040
	(0.0051)	(0.0051)	(0.0029)
U[nion]	0.2085^{***}	0.2034^{***}	0.0465^{***}
	(0.0118)	(0.0133)	(0.0054)
D×U	-0.0052	-0.0047	-0.0002
	(0.0170)	(0.0180)	(0.0033)

Table 6.A. Impact of Party Affiliation on Unionization, Additional Controls

Variable	Unionization	Deunionization
D[emocrat]	0.0001	0.0044
	(0.0012)	(0.0058)

Table 6.B. Impact of Party Affiliation on Labor Markets, Additional Controls

Variable	Weekly Earning	Hourly Earning	Hours per Week
D[emocrat]	0.0005	-0.0022	0.0023
	(0.0055)	(0.0054)	(0.0028)
U[nion]	0.2069^{***}	0.2080^{***}	0.0250^{***}
	(0.0151)	(0.0153)	(0.0023)
D×U	-0.0006	0.0023	-0.0003
	(0.0135)	(0.0126)	(0.0035)

Notes: The data draw on the CPS ORG samples from CEPR Uniform Extracts for 1983–2013. The sample contains only private sector workers. All regressions include state fixed effects, time effects, industry fixed effects, industry-specific fixed effects, and region specific fixed effects as well as all other control variables specified in equation (1). Numbers in parentheses are standard errors based on clustering data at state level; ***, **, and * represent statistical significance at the 1%, 5%, and 10% level, respectively.

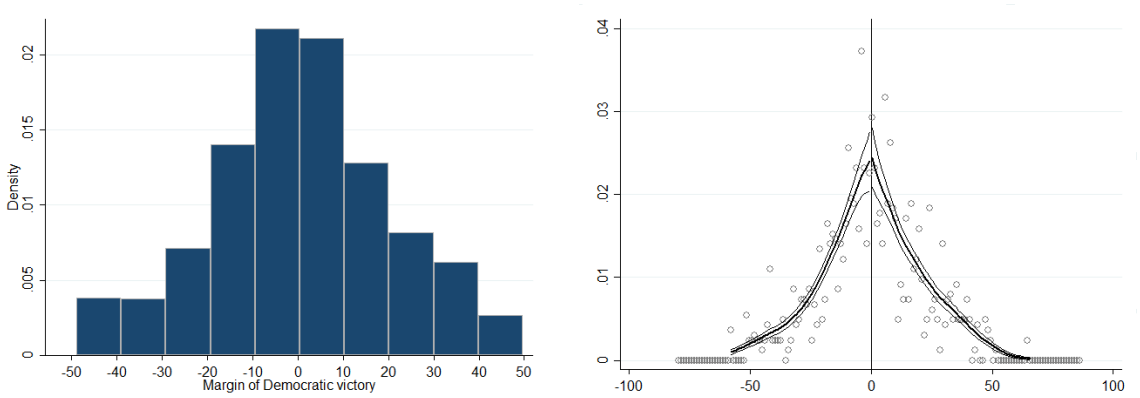
dummies as well as all other control variables specified in equations (2) and (3).[18] In addition, we restrict our sample to cover only workers in the private sector. Tables 6.A and 6.B report results, and their comparisons with those in Tables 1.A and 1.B indicate that including the new control variables and restricting the sample to private workers have no significant impact on the results. Finally, we investigate the implications of party affiliation excluding states that consistently elect a governor from a single party. More specifically, we exclude the states where Democrats and Republicans were in office at least 30% of the time over the period 1983–2013. The results (available upon request) are similar to those presented in Tables 1.A and 1.B.

3.2 Evaluation of the RD Design

The validity of our regression results presented in the previous sections depends on whether our RD approach is a valid way to evaluate the impact of party affiliation on unions and their members' labor-market conditions. This section addresses this question, and to this end we follow a checklist proposed by Lee and Lemieux (2010 & 2014). First, a crucial assumption in our RD designs is that states where Democrats marginally won elections must be similar to states where they marginally lost elections. To test the validity of this assumption, we regress certain characteristics of states (such as fraction of blacks in population, fraction of unskilled workers, fraction of unionized workers, etc) on the indicator variable D[emocrat] in RD designs to determine whether the estimated coefficient for D[emocrat] is statistically significant. However, our regressions yield statistically insignificant coefficients for D[emocrat], suggesting that the above identification assumption is not violated.

Second, another important assumption about the validity of our RD approach is that candidates should not have any control over the election results. One quick way to determine the validity of this assumption in our framework is to look at the histogram of the Margin of Victory (MV). If a candidate had a control over the election results we should have observed unusual jumps around the cutoff point (i.e., zero) and/or distribution of the MV was skewed towards one party. According to Figure 2.a, none of the aforementioned anomalies is present. A more precise way to assess the validity of this assumption is to use the McCrary (2008) test. Figure 2.b plots the density function of the MV based on the procedure in McCrary (2008), and there are no unusual jumps around the cutoff.

[18] We did not include sector related variables in our main specifications, because their inclusion make our estimates suffer from endogeneity.



a. Density Based on Histograms

b. Density Based on McCrary

Figure 2: Distribution of the Margin of Victory

Third, we need to show that our results are robust to different orders of the polynomials and local-linear regressions. In a recent paper, Gelman and Imbens (2014) argue that in RD designs one should not use higher than second-order polynomials, and in our main analysis we used a second-order polynomial function for $F(MV)$. Tables A.1.A and A.1.B in the appendix present the results based on the first-order polynomial, and the results presented in these tables are qualitatively the same as those in Tables 1.A and 1.B.[19] We also investigated the robustness of our results using local-linear RD and optimal bandwith procedures of Imbens and Kalyanaraman (2012).[20] Table A.2 present the results for the local-linear specifications using grouped data by state and year, and note that estimated coefficients are qualitatively similar to those in our benchmark results presented in Tables 1.A and 1.B.

Finally, we need to show that our results are not driven by the persistence of the outcome variables. For example, the RD designs yield biased estimates, if Democratic governors are more likely to be elected in state-years when union members have better labor-market outcomes. To address this problem, we use a placebo test where we replace the outcome variables in specifications (2) and (3) with the corresponding variables measured one term ago, and check for the balance between the control and treatment group. The results are presented in Tables A.3.A and A.3.B in the appendix, and their comparisons with Table

[19]The results based on third-order polynomial (available upon request) are qualitatively the same as those in Tables 1.A and 1.B.

[20]Using the procedure developed by Colanico et al. (2014) yields qualitatively the same results.

1.A and 1.B suggest no discontinuity in the last term outcome.[21]

4 Conclusion

For decades, unions have been strong supporters of the Democratic Party. They rallied their members to vote for Democrats and funneled money to Democratic candidates so that they could win elections. Intuition suggests that the steady and strong support from unions stems from the Democratic Party's positive effects on unions. But how significant has been the effects of Democrats on unions?

In this paper, we investigate causal impact of the Democratic governors in U.S. states on unionization of workers and labor market outcomes of unionized workers. To deal with the endogeneity of party affiliation of governors, we implement a regression discontinuity (RD) design using data on gubernatorial elections in U.S. states between 1983 and 2013. Exploiting the variation in close elections, we find no significant impact of Democrats on unionization of workers. Furthermore, we find no impact of Democratic governors on unionized workers' labor-market outcomes either. Our sensitivity analysis confirms our basic conclusion: contrary to the common perception, Democrats have not had any significant positive impact on unions.

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[21]We also investigate whether campaign spending by Democrats across states with close elections are different from that by Republicans (Caughey and Sekhon (2011)). Using data from Jensen and Beyle (2003), we find no evidence for this. Furthermore, for close elections to be regarded fully random, these elections won by Democratic governors should not be more likely to come with a Democratic House or Senate. We checked and confirmed that those variables are not statistically different when Democrats barely won.

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Appendix

Table A.1.A. Impact of Party Affiliation on Unionization, First-Order Polynomial

Variable	Unionization	Deunionization
D[emocrat]	0.0017	−0.0047
	(0.0011)	(0.0082)

Table A.1.B. Impact of Party Affiliation on Labor Markets, First-Order Polynomial

Variable	Weekly Earning	Hourly Earning	Hours per Week
D[emocrat]	−0.0007	−0.0014	0.0016
	(0.0043)	(0.0040)	(0.0022)
U[nion]	0.1999***	0.1979***	0.0435***
	(0.0109)	(0.0114)	(0.0051)
D×U	0.0026	0.0012	0.0048
	(0.0158)	(0.0161)	(0.0036)

Table A.2. Local Linear Analysis Based on Imbens and Kalyanaraman (2012)

	Union	Deunion	Weekly Earning	Hourly Earning	Hours per Week
D[emocrat]	0.0035	−0.0171	0.0255	0.0376	−0.0073
	(0.0029)	(0.0150)	(0.0372)	(0.0344)	(0.0087)

Notes: The data draw on the CPS ORG samples from CEPR Uniform Extracts for 1983–2013. All regressions include state fixed effects, time effects, and all other control variables specified in equation (1). Numbers in parentheses are standard errors based on clustering data at state level; ***, **, and * represent statistical significance at the 1%, 5%, and 10% level, respectively.

Table A.3.A. Impact of Party Affiliation on Unionization, One Term Ago

Variable	Unionization	Deunionization
D[emocrat]	0.0018	0.0034
	(0.0014)	(0.0112)

Table A.3.B. Impact of Party Affiliation on Labor Markets, One Term Ago

Variable	Weekly Earning	Hourly Earning	Hours per Week
D[emocrat]	−0.0018	−0.0002	−0.0040
	(0.0074)	(0.0067)	(0.0033)
U[nion]	0.2010***	0.1978***	0.0447***
	(0.0094)	(0.0087)	(0.0058)
D×U	−0.0015	−0.0006	0.0012
	(0.0108)	(0.0111)	(0.0039)

Notes: The data draw on the CPS ORG samples from CEPR Uniform Extracts for 1983–2013. All regressions include state fixed effects, time effects, and all other control variables specified in equation (1). Numbers in parentheses are standard errors based on clustering data at state level; ***, **, and * represent statistical significance at the 1%, 5%, and 10% level, respectively.